

ABSTRACT OF THE DISCLOSURE

The present invention provides an optical apparatus comprising an optical gain correction filter having a multilayer film structure formed by stacking a plurality of thin films with different diffractive indexes on a light transmitting board, wherein when the light with the wavelength λ enters at the incident angle θ , the transmissivity is assumed to be $T_1(\lambda, \theta)$ ($0 \leq T_1(\lambda, \theta) \leq 1$), and the thickness and stacking state of each thin film of the optical gain correction filter are adjusted to increase the transmissivity $T_1(\lambda_0, \theta)$ when the incident angle θ increases close to the predetermined maximum incident angle θ_{\max} with respect to the incident light with the wavelength λ_0 . The optical apparatus is applied to a bar code reader.